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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/966,551	09/26/2001	Bobby W. Sanders	26272/04003	5266

24024 7590 09/24/2002

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EXAMINER

DINH, TIEN QUANG

ART UNIT PAPER NUMBER

3644

DATE MAILED: 09/24/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/966,551

Applicant(s)

SANDERS ET AL

Examiner

T. Dinh

Art Unit

3644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☒ Claim(s) 11 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

T. Dinh  
1/26/02

## **DETAILED ACTION**

### ***Drawings***

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the plenums with control valves must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Specification***

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: In claim 8, line 2 and 4, the specification fails to disclosed that the external surfaces are within about 5 degrees of parallel to the flow or the interior surfaces at the entrance to the inlet are at angles of 3 to 10 degrees to the flow. In claim 9, there is no antecedent basis for the external surfaces not being aligned with the flow or the 0 degree flow aligned internal sidewall surfaces.

Claim 11 is objected to under 37 CFR 1.75(c) as being in improper form. See MPEP § 608.01(n). Accordingly, the claim 11 has not been further treated on the merits.

### ***Claim Rejections - 35 USC § 112***

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The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 2-9 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

In claim 2, it is not understood how the bleed regions on the interior surfaces of the inlet exiting into bleed plenums with fixed or variable-exit area control valves work. Doesn't the bleed plenums with fixed or variable-exit area control valve exit into the interior surfaces of the inlet and not the other way around? Does the fluid enter the interior surfaces via the plenums? Please explain this. What is a necessary tolerance? What is an inlet unstart?

In claim 6, it is not understood what the downstream exterior inlet surfaces are? How could the inlet surfaces have an exterior?

In claim 10, line 4, "what are off-design Mach number spillage considerations?"

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 2, line 2, "a stability bleed system" is a double inclusion in view of claim 1, line 3. Isn't this the same system or are they different? Please explain.

In claim 2, line 4, is the applicant claiming a fixed or a variable-exit area control valves.

In claim 2, line 8, "such adverse conditions" is vague and indefinite.

In claim 2, line 5, "the necessary tolerance" lacks antecedent basis.

The list above is merely exemplary. Therefore, the applicant should review the claims in their entirety for compliance with 35 U.S.C. 112.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Syberg in view of Tindell.

Syberg discloses a supersonic inlet where all of the air compression takes place and external surfaces that are substantially aligned with the airflow approaching the inlet and the cowl leading edges are staggered (see figure 1) but lacks the shock stability

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bleed system. However, Tindell discloses that shock stability bleed systems are well known in the art.

It would have been obvious to one skilled in the art at the time the invention was made to have used a shock stability bleed system in Syberg's system as taught by Tindell to control the boundary to increase the efficiency of the propulsion units.

Claims 2-9, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Syberg as modified by Tindell as applied to claim 1 above, and further in view of Ball et al.

Syberg as modified by Tindell discloses all claimed parts of the invention except for the bleed plenums to change the engine mass-flow demand which prevents inlet unstart. However, Ball et al teaches that plenums with a bleed system that inherently has control valves are well known in the art.

It would have been obvious to one skilled in the art at the time the invention was made to have used plenums with control valves in Syberg's system as modified by Tindell and as taught by Ball et al to increase the efficiency of the bleed system.

Re claims 3-5, please note that Syberg discloses an axisymmetric inlet with a variable cowl surface geometry (see figure 1) which meets the off design mass flow schedule. The interior surfaces of the inlet are composed of distinct compression angle.

Re claim 6, figure 4 of Syberg shows a round nacelle.

Re claims 7 and 8, the interior surfaces at the entrance of the inlet at an angle of about 2-10 degree to the flow (see figure 1).

Re claim 9, as best understood, the internal sidewall surfaces are aligned 0 degree to the flow. In addition, Tindell discloses that the external surfaces are not aligned with the flow are well known (see figure 1). It would have been obvious to one skilled in the art at the time the invention was made to have made the external surfaces not aligned in Syberg's system as taught by Tidell to increase the aerodynamic efficient of the aircraft for certain missions.

Re claim 8, during the design process, it would have been obvious to one skilled in the art at the time the invention was made to have made the external surfaces of Syberg as modified by Tindell within about 5 degrees so as to increase the aerodynamic efficient of the aircraft for certain missions.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Lennard, Miles, Lane, Kibens et al, Koncsek et al, and British Aerospace disclose inlet means.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to T. Dinh whose telephone number is 703-308-2798. The examiner can normally be reached on Monday Through Friday 8-6, alternate Monday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Jordan can be reached on 703-306-4159. The fax phone numbers

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for the organization where this application or proceeding is assigned are 703-306-4195 for regular communications and 703-306-4195 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-4177.

T. Dinh  
Examiner  
Art Unit 3644

TD  
September 21, 2002

T. Dinh  
9/20/02